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Carboxylate phosphabetaines based on tertiary phosphines and unsaturated dicarboxylic acids

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Abstract

By reaction of triorganylphosphines with unsaturated dicarboxylic acids adducts of betaine structure were synthesized whose stability depended on the character of substituents at phosphorus and on the structure of acid. The betaine obtained from phosphines and maleic and fumaric acids redily underwent decarboxylation into the corresponding monoacyl phosphonium derivatives. The structure of the latter was established by means of X-ray crystallography. The adduct prepared from phosphines and itaconic acid was stabilized by intramolecular hydrogen bond between the acylate anionic center and the "second" carboxy group. © 2007 Pleiades Publishing, Ltd.

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